

R E M A R K S

The independent claims (38 and 46) have been amended, to define further and more fully certain novel and distinguishing features of the invention, and to add reference numerals as requested by the Examiner. Since this present Amendment does not increase either the total number of claims or the number of independent claims (beyond that previously paid for), no extra-claims fee is necessary.

Claims 38 (apparatus; independent; amended), 39 - 45 (dependent on 38), and 46 (apparatus; independent; amended) are now in the application. All these claims are directed to the elected apparatus invention and are readable on the elected species (FIGS. 1-2).

Claims 38 - 46 have been rejected under 35 U.S.C. §103(a) as unpatentable over U.S. patent No. 3,760,093 (Pemberton) in view of U.S. patent No. 3,530,661 (Thomen), both previously cited, further in view of newly cited U.S. patent No. 4,009,561 (Young). This is the only ground of rejection or objection in the Office Action.

Support for Claim Amendments

Claims 38 and 46 have been amended to include reference numerals, as requested by the Examiner. The support for these added reference numerals in the application as originally filed is believed to be self evident from the drawing Figures.

In addition, claims 38 and 46 have been amended to recite that each roll set is configured and disposed for separately rolling **and shaping** each advancing wire. Support for "and shaping" may be found in the specification at p. 8, line 28, which refers to "a first pair of shaping rolls 28 and 30" and at p. 9, line 18, which refers

to the wires being "re-shaped as they pass between the rollers 42, 44."

Claims 38 and 48 have been further amended to define each roll set (28,30; 42,44) as comprising two oppositely disposed shaping rollers defining a plurality of aligned groove pairs (32,34; 46,48), each groove pair defining a groove for receiving and shaping a respective wire 24. These recitals are supported by the disclosure in the specification e.g. at p. 8, line 26 - p. 9, line 4, referring to FIG. 3, and p. 9, lines 15-20, referring to FIG. 6.

The §103(a) Rejection

In the rejection of the claims as unpatentable over Pemberton in view of Thomsen and further in view of Young, the Office Action asserts that "Pemberton discloses in Fig. 3 a plurality of rollers."

This is incorrect. Actually, Pemberton in Fig. 3 discloses a plurality of **dies** which "are mounted rigidly in line" and through which "the wires are pulled" (col. 3, lines 25-27). The Office Action also asserts that in Pemberton, "col. 3, lines 30-35 discloses rotating, it is inherent that the rolling passes positioned between the supply and the stranding machine." Apart from the fact that there are no "rolling passes" in Pemberton at all, but only stationary dies, the cited passage at col. 3, lines 30-35, of the patent describes a

"strander on which six reels holding supplies of the wires of the layer 12 are rotated around the line of the central wire 11 as the wires are pulled off into the die 17. In a like manner, but in the opposite direction of rotation, 12 round wires of the layer 13 are rotated around a compacted core being pulled into the die 18."

Thus it is clear that the "strander" in Pemberton rotates the strands only between the supply and the die into which the wires

advance, such die being the element referred to in the Office Action as a rolling pass; i.e., insofar as Pemberton teaches anything about the relative positions of a wire supply, a stranding machine and a rolling pass, it is that the stranding machine is positioned to rotate the wires between the supply and the rolling pass, contrary to what the Office Action contends is "inherent" in Pemberton.

In applying the newly cited Young patent, the Office Action implicitly acknowledges that neither Pemberton nor Thomen (hence, no combination of them) teaches rollers being applied to individual wires but only to an assembled core or cable which consists of an assembly of individual wire strands.

Applicants' response to the last previous Office Action amended claim 38 to emphasize that the individual wire strands are rolled separately from each other unlike the prior art represented by Pemberton and Thomen. Young has now been cited as disclosing "providing each roll set (15) being configured and disposed to separately roll each advancing wire (Fig. 2)" (Office Action, p. 3), and the Examiner asserts that it would have been obvious "to modify Pemberton by providing each roll set being configured and disposed to separately roll each advancing wire, as taught by Young, for the purpose of performing [sic; preforming] each wire."

In fact, what Young shows is the provision of "preforming heads" 15, 21 to preform or guide the individual wires prior to converging at a die 16, 22. The so-called preforming heads are illustrated in Fig. 2 of Young as consisting of a plurality of wheels coupled in a ring having a diameter corresponding to the spacing between wire stands. There is no description of what the preforming heads would do.

Preforming of wires is well known in the industry as the method necessary to counteract the twisting effect imparted to stiff wires (steel or high strength aluminum) during stranding. If

this is not done the finished wire will have a corkscrew effect. There is minimal to no reduction in wire area, or shape. Unlike the subject invention, these devices never have two shaping rollers directly opposed on a wire in order to specifically change the area reduction and shape of that wire as illustrated by applicants' Figs. 4a and 4b.

Preforming is nearly always used with Postforming. Postforming of wires is well known in the industry as the method necessary to assist preforming in reducing the twisting effect imparted to stiff wires (steel or high strength aluminum) during stranding. At times Postforming alone can have the desired effect. There is minimal to no reduction in wire area, or shape. These devices never have two shaping rollers directly opposed on a strand.

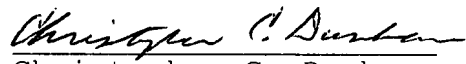
To clarify pertinent differences between applicants' claimed invention and Young, the two independent claims (38 and 46) have both been amended to recite that each roll set is configured and disposed for separately rolling **and shaping** each advancing wire, and to define each roll set (28,30; 42,44) as comprising two oppositely disposed shaping rollers defining a plurality of aligned groove pairs (32,34; 46,48), each groove pair defining a groove for receiving and shaping a respective wire 24.

As stated, the Young preforming heads 15 are not roll sets for shaping each advancing wire. The provision of two shaping rollers directly opposed on a wire in order to change the area reduction and shape of that wire would not perform Young's preforming function, or indeed serve any purpose discernable from Young; consequently, there is nothing in the applied references, taken together, that would have made obvious the inclusion of such shaping rollers in the apparatus of Pemberton whether or not modified in view of Thomen as the Examiner proposes.


It is therefore submitted that claims 38 and 46, especially as herein amended to include the added recitals discussed above, distinguish clearly and patentably over Pemberton, Thomen and Young, however combined. Claims 39 - 45, being dependent on claim 38, are submitted to be allowable therewith.

For the foregoing reasons, it is believed that this application is now in condition for allowance. Favorable action thereon is accordingly courteously requested.

Respectfully,


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I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


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